



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/555,258	11/01/2005	Jorn Ungermann	DE 030146	7824
65913 NXP, B.V. NXP INTELLECTUAL PROPERTY DEPARTMENT M/S41-SJ 1109 MCKAY DRIVE SAN JOSE, CA 95131	7590 12/13/2007		EXAMINER LAMARRE, GUY J	
			ART UNIT 2112	PAPER NUMBER
			NOTIFICATION DATE 12/13/2007	DELIVERY MODE ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

ip.department.us@nxp.com

mv

Office Action Summary	Application No. 10/555,258	Applicant(s) UNGERMANN ET AL.	
	Examiner Guy J. Lamarre	Art Unit 2112	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 November 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 November 2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Art Unit: 2112

DETAILED ACTION

* Pursuant to 35 USC 131, **Claims 1-15** are presented for examination.

Claim Rejections - 35 USC § 102

1. **Claims 1-15** are rejected under 35 U.S.C. 102(b) as being anticipated by **Berthaud** (USP # 6,157,957).

As per **Claims 1-15**, **Berthaud** discloses, e.g., in Figs. 3, 5 & 7 and col. 1 line 8 et seq., col. 4 line 7 - col. 5 line 25, col. 6 line 64 - col. 8 line 14 et seq., equivalent Clock synchronization statistical approach.

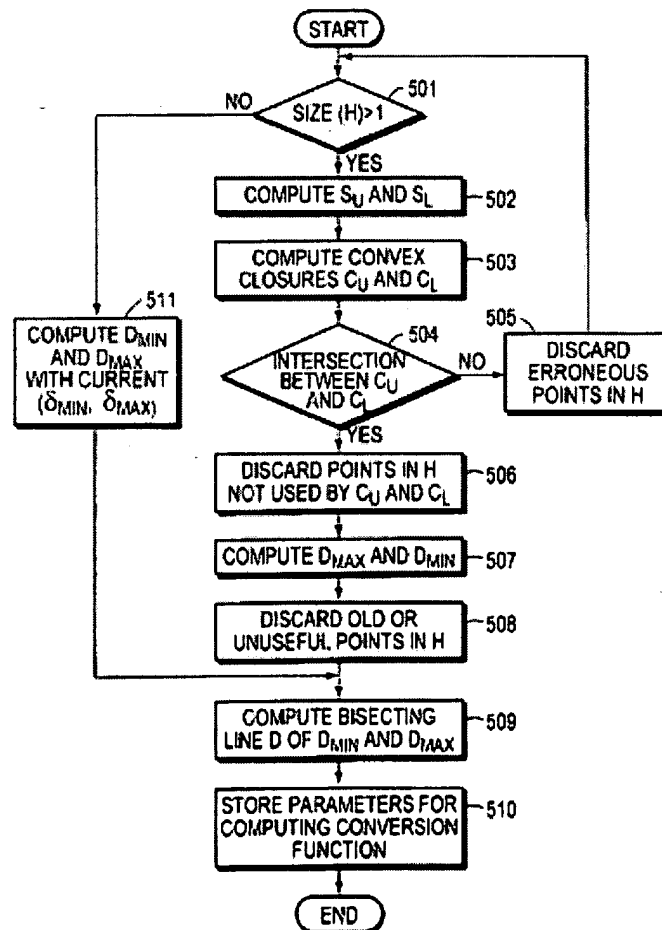


FIG. 5

Art Unit: 2112

As per Claim 1, Berthaud discloses, e.g., in Figs. 3, 5 & 7 and col. 1 line 8 et seq., col. 4 line 7 - col. 5 line 25, col. 6 line 64 - col. 8 line 14 et seq., equivalent method for the temporal synchronization of clocks (15) which are assigned to nodes (10) that communicate via a communication medium (5), characterized by the following steps: at least for the nodes (10) that are to be synchronized: acquiring (110) state values which are dependent on a time base of the nodes (10); for all acquired state values: filing (120) the acquired state value at a corresponding position in a first list (L) comprising (k+1) positions, if the acquired state value is smaller than the (k+1) smallest element or is smaller than or equal to the (k+1) smallest element of the list (L) and where k is a predefinable error tolerance; for all acquired state values: filing (130) the acquired state value at a corresponding position in a second list (H) comprising (k+1) positions, if the acquired state value is greater than the (k+1) greatest element or is greater than or equal to the (k+1) greatest element of the list (H); forming (160) a mean value (M) from the (k+1) smallest element of the first list (L) and the (k+1) greatest element of the second list (H), ..., (2k+2), where n is the number of acquired state values; determining (170) a correction value (K) as a function of the mean value (M); and correcting (180) the clocks (15) that are to be synchronized such that a current state value of this clock (15) takes the correction value into account.

As per Claim 2, Berthaud discloses, e.g., in Figs. 3, 5 & 7 and col. 1 line 8 et seq., col. 4 line 7 - col. 5 line 25, col. 6 line 64 - col. 8 line 14 et seq., equivalent method as claimed in claim 1, characterized in that the filing (120, 130) of the determined state values in the first list (L) and/or in the second list (H) is carried out sequentially.

As per Claim 3, Berthaud discloses, e.g., in Figs. 3, 5 & 7 and col. 1 line 8 et seq., col. 4 line 7 - col. 5 line 25, col. 6 line 64 - col. 8 line 14 et seq., equivalent method as claimed in claim 1, characterized in that the first list (L) is formed by corresponding registers (L₀, L₁, . . . , L_k)

Art Unit: 2112

and/or the second list (H) is formed by corresponding registers (H0, H1, . . . , Hk).

As per Claim 4, Berthaud discloses, e.g., in Figs. 3, 5 & 7 and col. 1 line 8 et seq., col. 4 line 7 - col. 5 line 25, col. 6 line 64 - col. 8 line 14 et seq., equivalent method as claimed in claim 1, characterized in that the first list (L) is initialized with values which are greater than the greatest state value that is to be expected; and/or the second list (H) is initialized with values which are smaller than the smallest state value that is to be expected.

As per Claim 5, Berthaud discloses, e.g., in Figs. 3, 5 & 7 and col. 1 line 8 et seq., col. 4 line 7 - col. 5 line 25, col. 6 line 64 - col. 8 line 14 et seq., equivalent method as claimed in claim 1, characterized in that during filing (120) of an acquired state value in the first list (L) a sorting in terms of the size of the stored state values is retained so that $\text{value}(L_0) \dots \text{value}(L_1 \dots)$ is always true, where L_0, L_1, \dots, L_k denote the $(k+1)$ positions of the list (L) and $\text{value}(L_i)$ is the value at a position (L_i) ; and during filing (130) of an acquired state value in the second list (H) a sorting in terms of the size of the stored state values is retained so that $\text{value}(H_0) \dots \text{value}(H_1) \dots \dots \text{value}(H_k)$ is always true, where H_0, H_1, \dots, H_k denote the $(k+1)$ positions of the list (H) and $\text{value}(H_i)$ is the value at a position (H_i) .

As per Claim 6, Berthaud discloses, e.g., in Figs. 3, 5 & 7 and col. 1 line 8 et seq., col. 4 line 7 - col. 5 line 25, col. 6 line 64 - col. 8 line 14 et seq., equivalent method as claimed in claim 1, characterized in that a state value (Z) is stored at a position (L_i) of the first list (L) as a function of the following steps: the positions (L_0, L_1, \dots, L_k) are searched for a position (L_i) of the first list (L), so that the following is true: $\text{value}(L_0) \dots \text{value}(L_1) \dots \dots \text{value}(L_i) \geq \text{value}(L_{i+1}) \geq \dots \geq \text{value}(L_k)$; if no such position (L_i) is found, then the state value (Z) is rejected; if such a position (L_i) is found, then for all positions $\{(L_j) | 0 \leq j < i\}$ the value (L_j) stored at the position (L_j) is replaced by the value (L_{j+1}) stored at the position L_{j+1} and the state value (Z) is stored at the position (L_i) of

the list (L).

As per Claim 7, Berthaud discloses, e.g., in Figs. 3, 5 & 7 and col. 1 line 8 et seq., col. 4 line 7 - col. 5 line 25, col. 6 line 64 - col. 8 line 14 et seq., equivalent method as claimed in claim 1, characterized in that a state value (Z) is stored at a position (Hi) of the second list (H) as a function of the following steps: the positions (H0, H1, . . . , Hk) are searched for a position (Hi) of the second list (H), so that the following is true: $\text{value}(H0) \leq \text{value}(H1) \leq \dots \leq \text{value}(Hi) \leq Z \leq \text{value}(H(i+1)) \leq \dots \leq \text{value}(Hk)$; if no such position (Hi) is found, then the state value (Z) is rejected; if such a position (Hi) is found, then for all positions $\{Hj | 0 \leq j < i\}$ the value(Hj) stored at the position Hj is replaced by the value(H(j+1)) stored at the position H(j+1) and the state value (Z) is stored at the position (Hi) of the list (H).

As per Claim 8, Berthaud discloses, e.g., in Figs. 3, 5 & 7 and col. 1 line 8 et seq., col. 4 line 7 - col. 5 line 25, col. 6 line 64 - col. 8 line 14 et seq., equivalent method as claimed in claim 1, characterized in that the following steps are carried out: as a function of an error tolerance (k), a set (B) of predefinable end values ($\{B0, B1, \dots, B(k-1)\}$) is predefined such that $B0=0$; $B_i \leq B(i+1)$, for all $i \in \{0, 1, \dots, (k-1)\}$; and $2j < B(j)$, for all $j \in \{1, \dots, (k)\}$; if $B_k \geq n$, a value i for $i \in \{0, 1, \dots, (k-1)\}$ is selected as a function of the number n of acquired state values such that the condition $B_i \leq n < B(i+1)$ is true; if $B_k \geq n$, $i=k$ is selected; and the mean value (M) is formed from the values $\text{value}(L(k-j))$ and $\text{value}(H(k-j))$ stored at the positions $L(k-i)$ and $H(k-i)$.

As per Claim 9, Berthaud discloses, e.g., in Figs. 3, 5 & 7 and col. 1 line 8 et seq., col. 4 line 7 - col. 5 line 25, col. 6 line 64 - col. 8 line 14 et seq., equivalent method as claimed in claim 1, characterized in that the following values are predefined: error tolerance $k=2$; end value $B1=3$; and end value $B2=8$.

Art Unit: 2112

As per Claim 10, Berthaud discloses, e.g., in Figs. 3, 5 & 7 and col. 1 line 8 et seq., col. 4 line 7 - col. 5 line 25, col. 6 line 64 - col. 8 line 14 et seq., equivalent node (10) which communicates with other nodes (10) by means of a communication medium, characterized in that the node (10) has a clock (15); has means for acquiring state values, the state values being dependent on a time base of the node (10) and/or on a time base of the other nodes; has a first list (L) comprising (k+1) positions and a second list (H) comprising (k+1) positions; has means for filing (120) an acquired state value at a corresponding position of the first list (L); has means for filing (130) an acquired state value at a corresponding position of the second list (H); has means for forming (160) a mean value (M) from an element of the first list (L) and an element of the second list (H); has means for forming a correction value (K); and has means for correcting the clock (15).

As per Claim 11, Berthaud discloses, e.g., in Figs. 3, 5 & 7 and col. 1 line 8 et seq., col. 4 line 7 - col. 5 line 25, col. 6 line 64 - col. 8 line 14 et seq., equivalent node (10) which communicates with other nodes (10) by means of a communication medium, characterized in that the node (10) has a clock (15); has means for acquiring state values, the state values being dependent on a time base of the node (10) and/or on a time base of the other nodes; has a first list (L) comprising (k+1) positions and a second list (H) comprising (k+1) positions; has means for filing (120) an acquired state value at a corresponding position of the first list (L); has means for filing (130) an acquired state value at a corresponding position of the second list (H); has means for forming (160) a mean value (M) from an element of the first list (L) and an element of the second list (H); has means for forming a correction value (K); and has means for correcting the clock (15), characterized in that a method as claimed in claim 1 is carried out in the node (10).

As per Claim 12, Berthaud discloses, e.g., in Figs. 3, 5 & 7 and col. 1 line 8 et seq., col. 4 line 7 - col. 5 line 25, col. 6 line 64 - col. 8 line 14 et seq., equivalent communication system (1) which has a number of nodes (10) that communicate via a communication medium (5), characterized in that at

Art Unit: 2112

least one node (10) has a clock (15); has means for acquiring state values; has a first list (L) comprising (k+1) positions and a second list (H) comprising (k+1) positions; has means for filing (120) an acquired state value at a corresponding position of the first list (L); has means for filing (130) an acquired state value at a corresponding position of the second list (H); has means for forming (160) a mean value (M) from an element of the first list (L) and an element of the second list (H); has means for forming a correction value (K); and has means for correcting the clock (15).

As per Claim 13, Berthaud discloses, e.g., in Figs. 3, 5 & 7 and col. 1 line 8 et seq., col. 4 line 7 - col. 5 line 25, col. 6 line 64 - col. 8 line 14 et seq., equivalent communication system (1) which has a number of nodes (10) that communicate via a communication medium (5), characterized in that at least one node (10) has a clock (15); has means for acquiring state values; has a first list (L) comprising (k+1) positions and a second list (H) comprising (k+1) positions; has means for filing (120) an acquired state value at a corresponding position of the first list (L); has means for filing (130) an acquired state value at a corresponding position of the second list (H); has means for forming (160) a mean value (M) from an element of the first list (L) and an element of the second list (H); has means for forming a correction value (K); and has means for correcting the clock (15), characterized in that a method as claimed in claim 1 is carried out in at least one node (10).

As per Claim 14, Berthaud discloses, e.g., in Figs. 3, 5 & 7 and col. 1 line 8 et seq., col. 4 line 7 - col. 5 line 25, col. 6 line 64 - col. 8 line 14 et seq., equivalent computer program which can be run on a computer, in particular on a microprocessor, characterized in that the computer program is programmed to carry out a method as claimed in claim 1 when it is run on the computer.

As per Claim 15, Berthaud discloses, e.g., in Figs. 3, 5 & 7 and col. 1 line 8 et seq., col. 4 line 7 - col. 5 line 25, col. 6 line 64 - col. 8 line 14 et seq., equivalent computer program as claimed in claim 14, characterized in that the computer program is stored in a memory element, in particular in a Random Access Memory (RAM), a Read Only Memory (ROM) or a Flash memory.

Claim Rejections - 35 USC § 101

2. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

- .1 **Claim 14** are rejected under 35 U.S.C. 101 for claiming non-statutory subject matter: a program/code.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the **second** paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

- .1 **Claims 1-15** are rejected under the second paragraph of 35 U.S.C. 112 for it is unclear to the Examiner how the limitations are operatively linked to perform all the operating steps described therein.

It is also unclear to the Examiner what the temporal synchronization of the clock is effected in **Claims 1-9, 13-15**.

It is further unclear to the Examiner what the limitations of **Claims 14-15** are.

Drawings

4. The Drawings are objected to because the numerical labels do not convey adequate information to allow understanding of what is depicted without direct reference to the disclosure. Such Drawings shall be corrected accordingly. Fig. 5 fails to depict *frame gap 84*. Appropriate correction is required.

Claim Objections

5. **Claims 1-15** (is) are objected to for reciting bracketed information which are given no patentable weight: the brackets shall be removed and appropriate punctuation be provided. Appropriate correction is required.

Specification

6. The **specification** is objected to because it refers to the claims, which may be withdrawn, or amended, or canceled during the examination process (see Specification: page 7, line 11; page 9, line 9; and etc.). Applicants are required to review the Specification for deleting all the references to the claims and incorporate language of such claims into same Specification.

CONCLUSION

* Any response to this action should be mailed to:

Commissioner of Patents and Trademarks, Washington, D.C. 20231

or faxed to: (571) 273-8300 for all formal communications.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Guy J. Lamarre, P.E., whose telephone number is (571) 272-3826. The examiner can normally be reached on Monday to Friday from 9:30 AM to 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jacques Louis-Jacques, can be reached at (571) 272-6962.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (571) 272-3609.

Information regarding the status of an application may also be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Guy J. Lamarre, P.E.
Primary Examiner
